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10/781,795

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EXAMINER

MATTHEWS, COLLEEN ANN

ART UNIT

PAPER NUMBER

2811

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|------------------------------------|--|
| Office Action Summary | Application No. 10/781,795 | Applicant(s) ARAI ET AL. | |
| | Examiner Colleen A. Matthews | Art Unit 2811 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 12, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) 28-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

1. Applicant's election without traverse of Claims 1-27 in the reply filed on 12 October 2005 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the a plurality of semiconductor film(s) isolated from one another which are provided over one surface of the insulating film" described in claims 1, 6, 9, 12, 15, 20 and 24 must be shown or the feature canceled from the claims. Additionally, "the wiring connected to an impurity region of the semiconductor film" described in claim 12 must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - a. Figure 4A element 48 is not described in specification.
 - b. Applicant uses element 49 to describe both the antenna (page 13 lines 1-2) and the protective film (page 13 line 2).
 - c. Applicant states that the same reference numerals are referred to the same portions or parts that have similar functions (page 5 line 25-26). Then applicant sites antenna as element 31 in Figure 3 description (page 12 line 19). Applicant goes on to site antenna as element 49 for Figure 4A description (page 13 line 2-3), as element 51 for Figure 4B description (page 13 line 28), and as element 52 for figure 4C description (page 14 line 7). Figures 4A, 4B, and 4C are a cross section of Figure 3 along the a-a' line, therefore it is unclear why the antenna reference numerals for Figures 4A-4C differ from the antenna reference numeral in Figure 3.Appropriate correction is required.

Claim Objections

4. Claims 9, 12, 20, and 24 are objected to because of the following informalities:

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Claims 9, 12, 20 and 24 includes the limitation "a plurality of semiconductor film(s) isolated from one another which are provided over an insulating film as an active region." This wording implies that the insulating film is an active region.

Examiner suggestions changing to read as "a plurality of semiconductor films functioning as active regions isolated from one another which are provided over an insulating film."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-27 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 1, 6, 9, 12, 15, 20 and 24 require "a plurality of semiconductor films isolated from one another which are provided over one surface of the insulating film". However, there is not an adequate description within the specification of a device containing a plurality of semiconductor films that are isolated from one another.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,703,267 to Tanabe et al.

9. Regarding claims 1 and 4-5, as far as the claims can be understood, Tanabe et al. discloses a thin film integrated circuit device comprising an insulating film (Figure 11c element 1014b), a plurality of semiconductor films isolated from one another (element 1015), which are provided over one surface of the insulating film; a thin film integrated circuit having the plurality of semiconductor films, and a metal oxide provided over the other surface of the insulating film (element 1014a). Regarding the plurality of semiconductor films isolated from one another, Tanabe et al. discloses this in Figure 11a. Each transistor a semiconductor films and the transistor's semiconductor films are isolated from one another.

10. Regarding claim 2, Tanabe et al. discloses the metal oxide as WO₂ or WO₃ (Column 3 line 24).

11. Regarding claim 3, Tanabe et al. discloses the metal oxide as an oxide of an element selected from the group consisting of W, Ti, Ta, Mo, Nd, Ni, Co, Zr, Zn, Ru, Rh,

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Pd, Os, and Ir; an alloy containing the metal as a main component; or a chemical compound thereof (Page 2 Paragraph 009 lines 12-13).

12. Claims 6-8, 15-16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No 6,885,032 to Forbes et al.

13. Regarding claim 6, as far as the claim can be understood, Forbes et al. discloses an IC label (Figure 1 element 16) comprising an insulating film (Figure 5 element 44), a plurality of semiconductor films (Figure 5 element 50 and column 7 lines 12-14) isolated from one another which are provided over one surface of the insulating film, a thin film integrated circuit (Figure 2a element 20) having the plurality of semiconductor films as an active region, and an affixing means for affixing a surface of the IC label to a container (Figure 1 and column 5 lines 11-19). Regarding the plurality of semiconductor films in isolation, Forbes discloses this in Figure 4. Each transistor (Figure 4 element 30) comprises a plurality of semiconductor films and each transistor's semiconductor films are isolated from one another.

14. Regarding claim 7, Forbes et al. discloses the IC label (Figure 2c element 16') as a contactless type (column 2 lines 39-47).

15. Regarding claim 8, Forbes et al. discloses the surface of the IC label (Figure 1 element 16) can be printed with a character, a letter, text, a symbol, or a diagram (Figure 1 element 14 and column 2 line 9-12).

16. Regarding claim 15, as far as the claim can be understood, Forbes et al. discloses a container (Figure 1 element 12) comprising: an insulating film (Figure 5

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element 44); a plurality of semiconductor films (element 50 and column 7 lines 12-14) isolated from one another, which are provided over one surface of the insulating film, and a thin film integrated circuit having the plurality of semiconductor films as an active region, wherein the thin film integrated circuit (Figure 2a element 20) is adhered to the container (Figure 1 and column 5 lines 11-19). Regarding the plurality of semiconductor films, Forbes et al. discloses that the film can comprise one or more semiconductor films and that the semiconductor films are shown in isolation in Figure 4. Each transistor (30) comprises a plurality of semiconductor films and each transistor's semiconductor films are isolated from one another.

17. Regarding claim 16, Forbes et al. discloses a container according to claim 15 as above, where the thin film integrated circuit (Figure 2a element 20) is covered by a label (Figure 2b elements 22 and 24).

18. Regarding claim 18, Forbes et al. discloses a container according to claim 15 as above, where the thin film integrated circuit (Figure 2a element 20) is held between a first label (Figure 2b elements 22 and 24) and a second label film (Figure 5 element 32), and the second label is affixed to the thin film integrated circuit with an adhesive agent (Figure 5 element 36).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,885,032 to Forbes et al. in view of U.S. Pub. No. 2004/0256644 to Kugler et al.

21. Regarding claim 9, as far as the claim can be understood, Forbes et al. discloses an IC label (Figure 2 element 16') comprising a contactless thin film integrated circuit (column 2 lines 39-47), with the IC label being adhered to a container (Figure 1 and column 5 lines 11-10), where the thin film integrated circuit (Figure 21 element 20) comprises: a plurality of semiconductor films isolated from one another which are provided over an insulating film as an active region, a gate electrode (40) provided over the semiconductor film. Regarding the plurality of semiconductor films in isolation, Forbes discloses this in Figure 4. Each transistor (Figure 4 element 30) comprises a plurality of semiconductor films and each transistor's semiconductor films are isolated from one another.

Forbes et al. lacks teaching an antenna in a same layer as the gate electrode. Kugler et al. teaches an antenna in the same layer as the gate electrode (page 7 paragraph 75 lines 6-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna in the same layer as the gate electrode to Forbes et al. in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods.

22. Regarding claim 10, Forbes et al. in view of Kugler et al. teaches the antenna in the same layer as the gate electrode according to claim 9. Forbes et al. as modified

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lacks teaching the antenna with the same material as the gate electrode. Kugler et al. teaches the antenna formed from the same material as the gate electrode (page 2 paragraph 22 lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Forbes et al. by making the antenna with the same material as the gate electrode in order to further simplify production of the device by ordinary printing methods.

23. Regarding claim 11, Forbes et al. in view of Kugler et al. teaches the antenna in the same layer as the gate electrode according to claim 9. Forbes et al. as modified lacks teaching the antenna comprising a conductive paste. Kugler et al. teaches the antenna comprising a conductive paste (page 7 paragraph 76 lines 3-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Forbes et al. by having the antenna comprising a conductive paste in order to further simplify production of the device by ordinary printing methods.

24. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,885,032 to Forbes et al. in view of U.S. Pat. No. 6,878,643 to Krulevitch et al.

25. Regarding claim 12, as far as the claim can be understood, Forbes et al. discloses an IC label (Figure 1 element 16) comprising a contactless (column 2 lines 39-47) thin film integrated circuit (Figure 2a element 20), with the IC label adhered to a container (Figure 1 and column 5 lines 11-19), where the thin film integrated circuit comprises: a plurality of semiconductor films (Figure 5 element 50 and column 7 lines 12-14) isolated from one another which are provided over an insulating film as an active

region, and wiring (Figure 5 element 60) connected to an impurity region of the semiconductor film. Regarding the plurality of semiconductor films in isolation, Forbes discloses this in Figure 4. Each transistor (Figure 4 element 30) comprises a plurality of semiconductor films and each transistor's semiconductor films are isolated from one another.

Forbes et al. lacks teaching an antenna in a same layer as the wiring. Krulevitch et al. teaches an antenna (Figure 11 element 1104) in the same layer as the wiring (Figure 11 element 1106). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add to Forbes et al. the antenna in the same layer as the wiring in order to facilitate communication with a remote receiver.

26. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,885,032 to Forbes et al. in view of U.S. Pat. No. 6,878,643 to Krulevitch et al. in further view of U.S. Pub. No. 2004/0256644 to Kugler et al.

27. Regarding claim 13, Forbes et al. in view of Krulevitch et al. teach an IC label according to claim 12 as outlined above. Forbes et al. in view of Krulevitch et al. fail to teach the antenna comprises a same material as the gate wiring. Kugler et al. discloses an antenna made from a metal (column 5 paragraph 56 lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Forbes et al. by making the antenna from a metal that is the same as the metal wiring in order to further simplify production of the device by ordinary printing methods.

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28. Regarding claim 14, Forbes et al. in view of Krulevitch et al. teach an IC label according to claim 12 as outlined above. Forbes et al. in view of Krulevitch et al. fail to teach the antenna comprising a conductive paste. Kugler et al. discloses an antenna made from a conductive paste (page 7 paragraph 76 lines 3-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Forbes et al. by having the antenna comprise a conductive paste in order to further simplify production of the device by ordinary printing methods.

29. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,885,032 to Forbes et al. in view of U.S. Pub. No. 2002/0027247 to Arao et al.

30. Regarding claim 17, Forbes et al. teaches a container according to claim 16 as outlined above. Forbes et al. also teaches a protective film of SiN_x (Figure 5 element 70) provided between the thin film integrated circuit (Figure 2a element 20) and the label (Figure 2b elements 22 and 24). Forbes et al. lacks teaching the protective film having a DLC or CN film. Arao et al. teaches a protective film of DLC (Figure 10B element 704) provided on a thin film integrate circuit. It would have been obvious to one of ordinary skill in the art at the time the invention was made use the DLC film of Arao et al. as the protection layer in Forbes et al. in order to prevent the invasion of oxygen as well as water and also to mechanically protect the thin film integrated circuit.

31. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,703,267 to Tanabe et al. in view of U.S. Pat. No 6,885,032 to Forbes et al.

Regarding claim 19, Tanabe et al. teaches a metal oxide (Figure 11c element 1014a) provided over the other side of the insulating film. Tanabe lacks teaching the container according to claim 15. Forbes et al. teaches a container according to claim 15 as above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tanabe to have a container comprising the contactless thin film integrated circuit adhered to the container as in Forbes et al. in order to attach the IC to a products such as cell phones or RFID tags.

32. Claims 20, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,703,267 to Tanabe et al. in view of U.S. Pat. No 6,885,032 to Forbes et al. in further view of U.S. Pub. No 2004/0256644 to Kugler et al.

33. Regarding claim 20, as far as the claim can be understood, Tanabe et al. discloses a thin film integrated circuit comprising a plurality of semiconductor films (element 1015) isolated from one another which are provided over one surface of an isolating film (Figure 11c element 1014b) as an active region and a gate electrode (1013a) that is provided over the plurality of semiconductor films. Tanabe also discloses a metal oxide provided over the other surface of the insulating film (element 1014a). Regarding the plurality of semiconductor films isolated from one another, Tanabe et al. discloses this in Figure 11a. Each transistor a semiconductor films and the transistor's semiconductor films are isolated from one another.

Tanabe lacks teaching a container comprising a contactless thin film integrated circuit that is adhered to the container and lacks teaching an antenna provided in the same layer as the gate electrode.

Forbes et al. teaches a container (Figure 1 element 12) comprising a contactless (column 2 lines 39-47) thin film integrated circuit (Figure 2a element 20) that is adhered to the container (Figure 1 and column 5 lines 11-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tanabe to have a container comprising the contactless thin film integrated circuit adhered to the container as in Forbes et al. in order to attach the IC to a products such as cell phones or RFID tags.

Tanabe et al. in view of Forbes et al. teaches the limitations outlined above and lacks teaching an antenna provided in the same layer as the gate electrode. Kugler et al. teaches an antenna in the same layer as the gate electrode (page 7 paragraph 75 lines 6-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna in the same layer as the gate electrode to further modify Tanabe et al. in order to provide an identification device with an active antenna that can be deposited on a substrate with conventional printing methods.

34. Regarding claim 21, Tanabe et al. in view of Forbes et al. in further view of Kugler et al. teaches the container according to claim 20 as outlined above. Forbes et al. also discloses the thin film integrated circuit (Figure 2a element 20) covered by a label (Figure 2b elements 22 and 24).

35. Regarding claim 23, Tanabe et al. in view of Forbes et al. in further view of Kugler et al. teaches the container according to claim 20 as outlined above. Forbes et al. also discloses the thin film integrated circuit (Figure 2a element 20) held between a first label (Figure 2b elements 22 and 24) and a second label (Figure 5 element 32), and the second label is affixed to the thin film integrated circuit with an adhesive agent (Figure 5 element 36).

36. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,703,267 to Tanabe et al. in view of U.S. Pat. No 6,885,032 to Forbes et al. in view of U.S. Pub. No 2004/0256644 to Kugler et al. in further view of U.S. Pub. No. 2002/0027247 to Arao et al.

37. Regarding claim 22, Tanabe et al. in view of Forbes et al. in view of Kugler et al. teaches a container according to claim 20 as outlined above. Forbes et al. also teaches a protective film of SiN_x (Figure 5 element 70) provided between the thin film integrated circuit (Figure 2a element 20) and the label (Figure 2b elements 22 and 24). Forbes et al. lacks teaching the protective film having a DLC or CN film. Arao et al. teaches a protective film of DLC (Figure 10B element 704) provided on a thin film integrate circuit. It would have been obvious to one of ordinary skill in the art at the time the invention was made use the DLC film of Arao et al. as the protection layer in Forbes et al. in order to prevent the invasion of oxygen as well as water and also to mechanically protect the thin film integrated circuit.

38. Claims 24-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No 6,703,267 to Tanabe et al. in view of U.S. Pat. No 6,885,032 to Forbes et al. in further view of U.S. Pat. No 6,878,643 to Krulevitch et al.

39. Regarding claim 24, as far as the claim can be understood, Tanabe et al. discloses a thin film integrated circuit comprising a plurality of semiconductor films (element 1015) isolated from one another which are provided over one surface of an insulating film (Figure 11c element 1014b) as an active region and a wiring (1018a, 1018b) provided over the plurality of semiconductor films. Tanabe also discloses a metal oxide provided over the other surface of the insulating film (element 1014a). Regarding the plurality of semiconductor films isolated from one another, Tanabe et al. discloses this in Figure 11a. Each transistor a semiconductor films and the transistor's semiconductor films are isolated from one another.

Tanabe lacks teaching a container comprising a contactless thin film integrated circuit that is adhered to the container and lacks teaching an antenna provided in the same layer as the wiring.

Forbes et al. discloses a container (Figure 1 element 12) comprising a contactless (column 2 lines 39-47) thin film integrated circuit (Figure 2a element 20) that is adhered to a container (Figure 1 and column 5 lines 11-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made use modify Tanabe to have a container comprising the contactless think film integrated circuit adhered to the container as in Forbes et a. in order to attach the IC to a products such as cell phones or RFID tags.

Tanabe et al. in view of Forbes et al. teaches the limitations outlined above and lacks teaching an antenna provided in a same layer as the wiring. Krulevitch et al. teaches an antenna (Figure 11 element 1104) in the same layer as the wiring (Figure 11 element 1106). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Tanabe et al. by adding the antenna in the same layer as the wiring in order to facilitate communication with a remote receiver.

Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US. Pub. No. 2002/0042167 to Chae discloses a metal oxide layer of tungsten oxide (paragraph 33).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen A. Matthews whose telephone number is 571-272-1667. The examiner can normally be reached on Monday - Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAM
02/06/2006

A handwritten signature in black ink, appearing to read 'Eddie Lee', is positioned above the printed name.

EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800